

Title (en)
WIRELESS COMMUNICATIONS DEVICE PROVIDING ENHANCED BLOCK EQUALIZATION AND RELATED METHODS

Title (de)
DRAHTLOSE KOMMUNIKATIONSEINRICHTUNG ZUR BEREITSTELLUNG VERBESSERTER BLOCKENTZERRUNG UND DIESBEZÜGLICHE VERFAHREN

Title (fr)
DISPOSITIF DE COMMUNICATION SANS FIL FOURNISSANT UNE EGALISATION DE BLOC AMELIOREE ET PROCEDES ASSOCIES

Publication
EP 1854205 A2 20071114 (EN)

Application
EP 06734358 A 20060206

Priority

- US 2006003980 W 20060206
- US 5415805 A 20050209

Abstract (en)
[origin: US2006176983A1] A wireless communications device may include a wireless receiver receiving wireless signals having alternating known and unknown symbol portions over a channel, and a demodulator systolic array connected to the wireless receiver. The demodulator systolic array may include: a channel estimation module generating respective channel estimates for each unknown symbol portion based upon the known symbol portions; an autocorrelation module generating autocorrelation matrices based upon the channel estimates; a channel match filter module generating respective channel matching coefficients for the unknown symbol portions; a factorization module dividing the autocorrelation matrices into respective upper and lower autocorrelation matrices; a transformation module transforming the channel matching coefficients into upper and lower channel matching coefficients; and a back-substitution module determining the unknown symbol portions by estimating the unknown symbol portions based upon respective upper autocorrelation matrices and channel matching coefficients, respective lower autocorrelation matrices and channel matching coefficients, and combining the estimates.

IPC 8 full level
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CPC (source: EP US)
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